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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,959	12/18/2001	John William Artley		7183
7590	10/30/2003		EXAMINER	
John W. Artley 4 Park Avenue, Apt. 10-R New York, NY 10016			BOYD, JENNIFER A	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 10/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Applicant No.</b>	<b>Applicant(s)</b>	
	10/022,959	ARTLEY ET AL.	
	Examiner Jennifer A Boyd	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 03 September 2003.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 and 2 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) Notice of Informal Patent Application (PTO-152)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.      6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of claims 1 - 2 in the Response dated September 4, 2003 is acknowledged.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language.

Claim 2 is indefinite because it is unclear how the substrate is thermally relevant to human comfort. Is the substrate thick providing insulating effect when exposed to a human body? Does the substrate contain a substance which creates a thermally favorable environment? Is the substrate contain a particular fiber which provides the thermal relevance? It is suggested by the Examiner to amend the claim to provide details of physical and/or chemical properties of the substrate which provides the "thermal relevance". Additionally, what is thermal relevance? Does the substrate provide warming or cooling effect? For the purposes of examination at this time, the Examiner will interpret any textile material to have "thermal relevance" because it is known that exposing one's body to a textile material will provide at least a slight insulating effect.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Urben (US 5,562,739).

Urben is directed to a lyocell fiber treatment method (Title).

Urben teaches that a woven or knitted fabric comprising lyocell fiber (column 2, lines 30 – 35) is initially dried or washed and not dried prior to the application of a solution (column 2, 28 – 36). The Examiner equates the woven or knitted fabric to Applicant's "substrate" and the step is equated to Applicant's "preparation of a substrate for treatment". Urben teaches that a solution comprising a chemical reagent (column 2, lines 37 – 44) and a flexible linear polymer may be applied to the lyocell fabric (column 2, lines 59 – 67). It is known that the application of a solution to a substrate would result in a wet substrate because a solution inherently contains water or a liquid substance. Urben teaches that the flexible linear polymer may be polyethylene glycol (column 3, lines 8 – 11). The Examiner equates the flexible linear polymer to Applicant's "polyethylene glycol formulation" and equates the step to "exposing a substrate to a polyethylene glycol formulation to form a wet substrate". Urben teaches that the fabric may

dried and then cured (column 3, lines 42 – 47); the Examiner equates this step to Applicant’s “drying and curing the wet substrate to form a treated substrate”. Urben teaches that the fabric is then washed and dried. Urben notes that the washing removes catalyst and unreacted reagent and permits the pH of the dried fiber or fabric to be controlled at a desired value, for example around neutral pH (column 3, lines 52 – 55). The Examiner equates the step to “neutralizing the treated substrate” and “drying the neutralized substrate”. It is the position of the Examiner that a fabric in any manufacturing line will be mechanically manipulated, such as being wound onto a roll for shipping or storage.

6. Claims 1 – 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Soane et al. (US 2003/0013368 A1).

Soane et al. is directed to a nanoparticle-based permanent treatment for textiles (Title). Soane teaches that a solution comprising nanoparticles which are formed by contacting payload agent(s) with polymer(s) (page 2 [0014]). Soane teaches that one possible payload agent is an anti-microbial/fungal agent as required by claim 2. Soane teaches that the polymer can be polyethylene glycol (page 3, [0073]). The solution is exposed to a variety of different substrates such as fabrics and textiles made of natural or synthetic fibers (page 6, [0093]). It is the position of the Examiner that any fabric or textile will provide Applicant’s “thermal relevance” as required by claim 2 because it is known that exposing one’s body to a textile material will provide at least a slight insulating effect. Soane teaches that the substrate can be made by knitting, weaving or nonwoven manufacturing means (page 6, [0093]). The Examiner equates the step to “preparation of a substrate for treatment”. Soane teaches that the substrate is exposed to a solution of the textile-reactive payload nanoparticles and polymers, such

as polyethylene glycol as mentioned earlier (page 6, [0094-0096]). It is known that the application of a solution to a substrate would result in a wet substrate because a solution inherently contains water or a liquid substance. The Examiner equates the step to “exposing a substrate to a polyethylene glycol formulation to form a wet substrate”. Next, Soane teaches that the substrate is cured preferably after a drying step (page 6, [0094]). The Examiner equates this to Applicant’s “drying and curing the wet substrate to form a treated substrate”. Soane teaches that the pH of the solution should be kept at neutral to basic level which can be maintained by adding acid (page 6, [0097]). It should be noted that Soane does not specify a specific point in the procedure to alter the pH level, but only states that the pH should be kept at the appropriate level. Therefore, it is the position of the Examiner that the solution-treated substrate can be neutralized, or alter the pH, after the curing step. The Examiner equates this step to Applicant’s “neutralizing the treated substrate”. The substrate of Soane is dry substrate, therefore, a final step of manufacturing the substrate would be inherently drying the substrate. The Examiner equates the step to “drying the neutralized substrate”. It is the position of the Examiner that a fabric in any manufacturing line will be mechanically manipulated, such as being wound onto a roll for shipping or storage.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Examiner suggests that the Applicants review the below pertinent art to assist in narrowing the subject matter of the claims of their invention.

*Harper, Jr.* (US 4,780,102) is directed to a process for dyeing smooth-dry cellulosic fabric (Title). Harper teaches padding a cellulosic fabric with a solution comprising polyethylene glycol (column 1, lines 50 – 60). Harper teaches that the fabric can be dried, cured and washed if desired (column 4, lines 40 – 55). Harper fails to teach specifically neutralizing the substrate and being antimicrobial and effective against a range of bacterial and fungal organisms.

*Raynolds* (US 3,981,807) is directed to a durable textile treating adduct (Title). Raynolds teaches applying a treatment which can include anti-bacterial finishes and polyethylene glycol to a textile (column 1, lines 5 – 15 and column 2, lines 10 – 15). The treatment is applied to the textile, dried, cured and dried again (column 6, lines 10 – 35). Raynolds fails to teach neutralizing the treated substrate.

8. The Examiner has enclosed the Revised Amendment Practice Rules to aid the Applicants in writing their response.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 703-305-7082. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

Application/Control Number: 10/022,959  
Art Unit: 1771

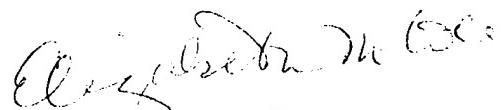
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Jennifer Boyd  
October 21, 2003

  
ELIZABETH M. COLE  
PRIMARY EXAMINER